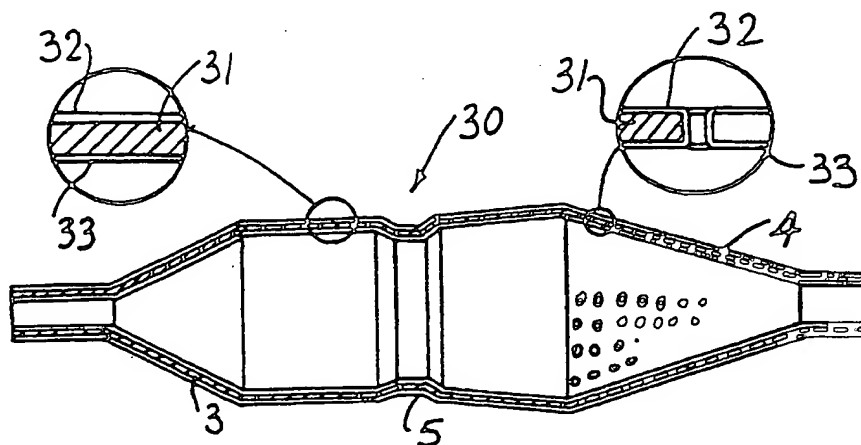




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(54) Title: IMPROVED FILTER ELEMENT FOR EMBOLIC PROTECTION DEVICE



(57) Abstract

A collapsible filter element (105) for a transcatheter embolic protection device (100) comprises a collapsible filter body (30) which is movable between a collapsed stored position for movement through a vascular system and an expanded position for extension across a blood vessel such that blood passing through the blood vessel is delivered through the filter element (105). A proximal inlet portion of the filter body (30) has one or more inlet openings (117) sized to allow blood and embolic material enter the filter body (30) and a distal outlet portion of the filter body (30) has a plurality of outlet openings (119) sized to allow through-passage of blood, but to retain embolic material within the filter body (30). The filter body (30) is at least partially of laminate construction comprising a membrane (31) coated with a coating (32, 33) which is biocompatible, the thickness of the coating (32, 33) being from 4% to 40% of the thickness of the membrane (31). The coating (32, 33) may be of hydrophilic material. To facilitate retrieval of captured embolic material the distal portion and/or an intermediate portion of the filter membrane (31) may be stretchable. The filter body (30) may have regions of varying hardness or stiffness.